

Clinical challenge

These questions are based on the Focus articles in this issue. Please choose the single best answer for each question.

CASE 1

Ronald, a man aged 53 years, presents with chest pain.

QUESTION 1

What is the best initial test for investigation of his presenting complaint?

- A. Troponin
- B. Electrocardiogram
- C. Echocardiogram
- D. Oximetry

QUESTION 2

Certain groups of patients might not exhibit typical symptoms of ischaemic chest pain, such as women, elderly patients, those with diabetes or:

- A. Gout
- B. Asthma
- C. Eczema
- D. Dementia

CASE 2

Alma, a girl aged five months, presents with a cardiac murmur.

QUESTION 3

Tetralogy of Fallot comprises right ventricular outflow tract obstruction, ventricular septal defect, aortic override and:

- A. Atrial septal defect
- B. Left ventricular hypertrophy
- C. Right ventricular hypertrophy
- D. Mitral valve stenosis

QUESTION 4

Common causes of acquired heart disease in Australian children include acute rheumatic fever, rheumatic heart disease, complications in previously treated congenital heart disease, myocarditis, arrhythmias, cardiomyopathy, endocarditis and:

- A. Kawasaki disease
- B. Meningococcal disease
- C. Down's syndrome
- D. Ehlers–Danlos syndrome

CASE 3

Jennifer, a woman aged 40 years, with aortic stenosis presents for review.

QUESTION 5

Which of the following procedures improves the mortality of patients with symptomatic severe aortic stenosis?

- A. Mitral valve repair
- B. Aortic valve replacement
- C. Coronary artery bypass
- D. Transcutaneous cardiac pacing

QUESTION 6

At what monthly intervals should repeat echocardiogram be performed when monitoring a patient with severe aortic stenosis?

- A. 1–5 months
- B. 6–12 months
- C. 13–18 months
- D. 19–24 months

QUESTION 7

What is the best initial test for a patient presenting with suspected aortic stenosis?

- A. Stress sestamibi scan
- B. Cardiac computed tomography
- C. Transthoracic echocardiography
- D. Transoesophageal echocardiography

Continued on page 472.



The five domains of general practice

- Ⓓ1 Domain 1: Communication skills and the patient–doctor relationship
- Ⓓ2 Domain 2: Applied professional knowledge and skills
- Ⓓ3 Domain 3: Population health and the context of general practice
- Ⓓ4 Domain 4: Professional and ethical role
- Ⓓ5 Domain 5: Organisational and legal dimensions

These domains apply to all Focus articles, which are required reading for the Clinical challenge CPD activity.

How to use AJGP for your CPD

Each issue of the *Australian Journal of General Practice* (AJGP) has a focus on a specific clinical or health topic. Many GPs find the entire issue of interest and of relevance to their practice; some GPs find one or more articles in the journal relevant.

You can use AJGP for your CPD. If you want to use the entire issue for CPD, you must work your way carefully through each article in the issue and complete the Clinical challenge. When you do this, take time to read the articles carefully and critically, and think carefully about how you might adjust your practice in response to what you have learned.

We recommend that you access AJGP, the articles and the Clinical challenge through gplearning (<https://gpl.racgp.org.au/d2l/home>) (Activity ID: 858925). Then, when you complete the articles and the Clinical challenge, your CPD hours are automatically credited to your CPD account. If you work through the full issue of AJGP and complete the Clinical challenge, you will receive 12 CPD hours (six hours' Educational Activities and six hours' Reviewing Performance).

If you do not want to do the full AJGP issue, and you prefer to select one or more articles to read, you can QuickLog the CPD hours directly through your myCPD dashboard. As guidance, each article in AJGP would provide 1–2 CPD hours, split half Educational Activities and half Reviewing Performance.



CASE 4

Adele, woman aged 35 years, with a history of childhood Tetralogy of Fallot repair, presents for ongoing monitoring.

QUESTION 8

The decision to replace the pulmonary valve is made following right ventricular size confirmation. The gold standard for imaging the right ventricle is using:

- A. Cardiac magnetic resonance imaging
- B. Functional cardiac computed tomography
- C. Transoesophageal echocardiography
- D. Fluoroscopic cardiac catheterisation

QUESTION 9

What preventative lifestyle advice recommendation specific to Adele should be given?

- A. Low-sodium diet
- B. Good dental hygiene
- C. High-protein diet
- D. High-intensity exercise

QUESTION 10

Prevention of endocarditis during invasive procedures in patients with previously repaired Tetralogy of Fallot involves:

- A. Antibiotic prophylaxis
- B. Valve replacement
- C. Cardiology review
- D. Prophylactic anticoagulation

These questions are based on the Focus articles in this issue. Please write a concise and focused response to each question.

CASE 1

Ronald, a man aged 53 years, presents with chest pain.

QUESTION 1

List five types of chest pain that indicate the chest pain is unlikely to be due to angina.

QUESTION 2

List eight causes of gastrointestinal chest pain.

CASE 2

Alma, a girl aged five months, presents with a cardiac murmur.

QUESTION 3

List eight indications for referral for echocardiography in an infant presenting with a murmur.

QUESTION 4

List five red flags on history of an infant or child presenting with a murmur.

QUESTION 5

List 10 indications for referral to a paediatric cardiology service.

QUESTION 6

State four auscultatory findings of aortic stenosis.

QUESTION 7

State the flow pattern differences between innocent and pathological murmurs in children.

CASE 3

Jennifer, a woman aged 40 years, with aortic stenosis presents for review.

QUESTION 8

List five common symptoms of aortic stenosis.

CASE 4

Adele, woman aged 35 years, with a history of childhood Tetralogy of Fallot repair, presents for ongoing monitoring.

QUESTION 9

State 11 possible complications in adulthood following childhood repair of Tetralogy of Fallot.

QUESTION 10

List the exercise restrictions for adults who have undergone childhood Tetralogy of Fallot repair.

June 2024 Multiple-choice question answers

ANSWER 1: C

It is estimated that 20% of the Australian general population has at least moderate obstructive sleep apnoea.

ANSWER 2: A

Cognitive behavioural therapy for insomnia (CBTi) is the recommended first-line treatment for insomnia.

ANSWER 3: D

In-laboratory assessment is relevant for patients with unstable cardiovascular status (eg nocturnal angina or recurring cardiogenic pulmonary oedema), hypercapnic respiratory failure or a high pretest probability of obstructive sleep apnoea (OSA) and about to undergo major surgery, and those with a history of significant drowsiness while driving.

ANSWER 4: A

Obstructive sleep apnoea (OSA) screening questionnaires, such as the OSA50, STOP-Bang and Berlin questionnaires, can help general practitioners (GPs) identify patients who are at high risk of having OSA.

ANSWER 5: A

The major treatment options available for symptomatic obstructive sleep apnoea are positive airway pressure therapy, mandibular advancement splints, sleep apnoea surgery, positional therapy and weight loss.

ANSWER 6: C

Continuous positive airway pressure (CPAP) is the first-line treatment for most adults with symptomatic moderate to severe obstructive sleep apnoea.

ANSWER 7: C

Finishing daytime naps before 4.00 pm allows sufficient build-up of sleep pressure for bedtime.

ANSWER 8: C

Polysomnography data from a cohort of children in the Northern Territory between 2015 and 2021 revealed that 55% of First Nations Australian children and 44% of other Australian children had obstructive sleep apnoea.

ANSWER 9: D

Significant evidence now links several chronic diseases in children with worse sleep. This includes allergic rhinitis, asthma, cancer, cystic fibrosis, epilepsy and type 1 diabetes.

ANSWER 10: A

The most common 'strategy' used by shift workers to manage sleepiness was to 'accept it and keep going' (>90%).

June 2024 Short answer question answers

ANSWER 1

The two most prevalent sleep disorders in the adult Australian population are:

- obstructive sleep apnoea (OSA)
- chronic insomnia.

ANSWER 2

Six aspects of the physical examination for obstructive sleep apnoea are:

- body mass index (BMI)
- waist and neck circumference
- blood pressure
- cardiorespiratory examination
- inspection of the nose and throat for reduced nasal patency or a crowded pharyngeal airway
- craniofacial risk factors.

ANSWER 3

Untreated OSA can have major adverse effects on health and wellbeing and is associated with negative health outcomes such as increased risks of:

- cardiovascular disease (CVD)
- cognitive decline
- motor vehicle accidents (MVAs)
- depression.

ANSWER 4

Other potential benefits of continuous positive airway pressure (CPAP) include improved:

- anxiety and depression symptoms
- motor vehicle crash risk
- atrial fibrillation recurrence
- blood pressure control.

ANSWER 5

A BRUE is defined as an event in which the observer notes one or more of the signs of cyanosis, pallor, breathing cessation/decrease/irregularity, marked change in tone or altered level of responsiveness occurring for a period of less than one minute and then resolving to baseline in a child <12 months of age without a known causative medical condition, with subsequent medical evaluation resulting in a reassuring history, physical examination and vital signs.

ANSWER 6

Parasomnias are usually seen at transition points through the sleep stages and during arousals and include:

- sleepwalking
- sleep talking
- moaning
- bruxism
- twitching.

ANSWER 7

Red flag signs/symptoms (differential diagnosis) warranting referral include:

- a persistent abnormal cry (vocal fold immobility)
- noisy breathing with cutaneous haemangiomas (because this increases the likelihood of an airway haemangioma)
- noisy breathing with dysphagia (vascular ring)
- a history of prematurity with prolonged intubation (subglottic stenosis and cysts).

ANSWER 8

Optimising sleep hygiene can stabilise the circadian rhythm and stop sleep timing from drifting too late. Strategies include:

- maintaining similar bed and waking times on weekdays and weekends (<30-minute difference)
- exposure to natural morning sunlight
- dimming the lights in the evening
- avoiding technology use for the hour before bedtime
- keeping devices out of bedrooms or on silent mode to avoid checking them during the night
- regular mealtimes, particularly eating breakfast on waking
- daily exercise
- avoiding stimulant drinks and medications in the late afternoon and evening.

ANSWER 9

Insomnia refers to decreased sleep due to difficulty falling asleep, difficulty staying asleep or awakening too early.

ANSWER 10

Shift work disorder is a circadian rhythm sleep-wake disorder with chronic (longer than three months) symptoms of insomnia and/or high levels of sleepiness during wake time, variability in sleep-wake patterns and shorter sleep durations, in the context of shift work.